Part C

Facility Profile Outlier Review

Part C provides a description of the data
outlier review process used to screen the
1998 Facility Profile survey responses. The
SAS code comparing the "pre" and "post"
screening data set is provided as the
resultant printout detailing each data
revision. .

1   Facility Profile Outlier Review

2   To review the raw data provided by Facilities, a consistency check of "yes"

3   and "no" coding was preformed on the appropriate data fields. Also, checks and

4   algorithms were developed to eliminate duplicate records and non-post-office

5   locations. Facilities having large values of box counts or low utilization rates

6   were verified by phone or corrected, if a sizable discrepancy was found. Several

7   data base "explorations" were conducted to examine the raw data Facility Profile

8   data provided by Memphis. All observations having more than 6000 boxes

9   installed were contacted for verification. The data were also checked for

10   observations having more boxes rented than installed. The 350 observations

11   having the highest number of installed boxes were examined and re-coded if

12   appropriate. The 350 highest observations for in-use boxes were examined and

13   re-coded if appropriate. The 350 lowest observations in terms of percent

14   utilization were contacted and re-coded as appropriate. Similarly, the 350

15   highest, and 350 lowest, observations in terms of percent utilization were

16   examined. Also the 350 observations having the largest absolute difference

17   between installed and in use were examined and re-coded if appropriate.

18   In summary, 226 records were corrected. Corrections were positive and

19   negative, at the facility level for both boxes installed and in use data fields. On

20   net, the installed box count was reduced by 158,965 boxes while the in use box

21   count was increased by 64,139. The SAS listing starting on the following page

22   provided shows all corrections made to the Facility Profile data.

```
    STMT NO. MESSAGE
          2 IEFCOO1I PROCEDURE SAS WAS EXPANDED USING SYSTEM LIBRARY SYS3.PROCLIB
          6 IEF648I INVALID DISP FIELD- PASS SUBSTITUTED
         13 IEF648I INVALID DISP FIELD- PASS SUBSTITUTED
   IEF236I ALLOC. FOR H20593K SAS609 STEP1
   IGD101I SMS ALLOCATED TO DDNAME (NULLPDS )
           DSN (SYS99326.T125120.RAOOO.H20593K.NULLPDS.HO9  )
           STORCLAS (SCVIO) MGMTCLAS (          ) DATACLAS (          )
           VOL SER NOS= VIO
   IGD103I SMS ALLOCATED TO DDNAME STEPLIB
   IGD103I SMS ALLOCATED TO DDNAME
   IGD103I SMS ALLOCATED TO DDNAME
   IGD103I SMS ALLOCATED TO DDNAME
   IEF237I CO98 ALLOCATED TO
   IGD103I SMS ALLOCATED TO DDNAME CONFIG
   IEF237I DMY  ALLOCATED TO
   IGD103I SMS ALLOCATED TO DDNAME SASAUTOS
   IGD103I SMS ALLOCATED TO DDNAME
   IGD103I SMS ALLOCATED TO DDNAME SASHELP
   IGD103I SMS ALLOCATED TO DDNAME SASMSG
   IGD101I SMS ALLOCATED TO DDNAME (WORK     )
           DSN (SYS99326.T125120.RAOOO.H20593K.RO966444       )
           STORCLAS (SCVIO) MGMTCLAS (          ) DATACLAS (          )
           VOL SER NOS= VIO
   IEF237I JES2 ALLOCATED TO SASLOG
   IEF237I JES2 ALLOCATED TO SASLIST
   IGD101I SMS ALLOCATED TO DDNAME (SASPARM )
           DSN (SYS99326.T125120.RAOOO.H20593K.RO966445       )
           STORCLAS (SCVIO) MGMTCLAS (          ) DATACLAS (          )
           VOL SER NOS= VIO
   IEF237I JES2 ALLOCATED TO SYSUDUMP
   IGD103I SMS ALLOCATED TO DDNAME IN1
   IGD103I SMS ALLOCATED TO DDNAME IN2
   IEF237I JES2 ALLOCATED TO SYSIN
   IGD103I SMS ALLOCATED TO DDNAME SYSOOOO1
   IGD104I SAS.V609.NEWS                           RETAINED,  DDNAME=SYSOOOO1
   IEF237I JES2 ALLOCATED TO SYSOUT
   IEF237I DMY  ALLOCATED TO SYSOOOO2
   IEF237I DMY  ALLOCATED TO SYSOOOO3
   IEF237I DMY  ALLOCATED TO SYSOOOO4
   IEF237I DMY  ALLOCATED TO SYSOOOO5
   IEF142I H20593K SAS609 STEP1 - STEP WAS EXECUTED - COND CODE OOOO
   IGD104I SYS3.PROCSORT.V2R1.SAS608.LINKLIB       RETAINED,  DDNAME=
   IGD104I SAS.V609.LIBRARY                        RETAINED,  DDNAME=
   IGD104I SYS3.DB2R.DSNEXIT                       RETAINED,  DDNAME=
   IEF285I    SYS3X.DB2.DB2R.LOAD                    KEPT
   IEF285I    VOL SER NOS= SOFOOO.
   IGD104I SAS.V609.CNTL                           RETAINED,  DDNAME=CONFIG
   IGD104I SAS.V609.AUTOLIB                        RETAINED,  DDNAME=
   IGD104I SAS.V609.SASHELP                        RETAINED,  DDNAME=SASHELP
   IGD104I SAS.V609.SASMSG                         RETAINED,  DDNAME=SASMSG
   IGD105I SYS99326.T125120.RAOOO.H20593K.RO966444  DELETED,   DDNAME=WORK
   IEF285I    H20593.H20593K.JOB20715.D0000102.?    SYSOUT
   IEF285I    H20593.H20593K.JOB20715.D0000103.?    SYSOUT
   IGD105I SYS99326.T125120.RAOOO.H20593K.RO966445  DELETED,   DDNAME=SASPARM
   IEF285I    H20593.H20593K.JOB20715.D0000104.?    SYSOUT
   IGD104I H20593.MEMPHIS1.DATA                    RETAINED,  DDNAME=IN1
   IGD104I H20593.MEMPHIS2.DATA                    RETAINED,  DDNAME=IN2
   IEF285I    H20593.H20593K.JOB20715.D0000101.?    SYSIN
   IEF285I    H20593.H20593K.JOB20715.D0000105.?    SYSOUT
```

```
IGD105.  .S99326.T125120.RA000.H20593K.NULLPDS.HO9    DELETED,    L    .ME=NULLPDS
IEF375I  JOB/H20593K /START 1999326.1251
IEF376I  JOB/H20593K /STOP  1999326.1251 CPU    OMIN 01.84SEC SRB    OMIN OO.O5SEC
```

```
      //H2O593K JOB (PFD13,BIN2),'KIRK KANEER BIN 02',              JOB20715
      //    CLASS=H,MSGLEVEL=(1,1),NOTIFY=H2O593,                   00000200
      //    MSGCLASS=T                                              00000300
      /*ROUTE PRINT HQ1                                             00000400
      //* $ACFJ219 ACF2 ACTIVE SM1                                      ACF2
      //*
    2 //STEP1 EXEC SAS,REGION=5000K                                 00000500
    3 XXSASV609 PROC ENTRY=SASXA1,
      XX            CONFIG=NULLFILE,
      XX            LOAD='*.NULLPDS,VOL=REF=*.NULLPDS',
      XX            SASAUTO='*.NULLPDS,VOL=REF=*.NULLPDS',
      XX            OPTIONS=,
      XX            SORT=4,
      XX            DB2SYS='DB2R',
      XX            WORK='500,200'
      XX*********************************************************************
      XX*   PRODUCT: MVS SAS RELEASE 6.09                                **
      XX*   DOCUMENTATION: SAS COMPANION FOR THE MVS ENVIRONMENT, VERSION 6 **
      XX*   FROM: SAS INSTITUTE INC., SAS CAMPUS DRIVE, CARY, NC 27513    **
      XX*********************************************************************
    4 XXSAS609   EXEC PGM=&ENTRY,PARM='SORT=&SORT &OPTIONS',REGION=OM
      IEFC653I SUBSTITUTION JCL - PGM=SASXA1,PARM='SORT=4 ',REGION=OM
    5 XXNULLPDS   DD DISP=(MOD,PASS),DSN=&&NULLPDS,UNIT=SYSDA,
      XX             SPACE=(TRK,(1,1,1)),DCB=BLKSIZE=6160
    6 XXSTEPLIB   DD DISP=SHR,DSN=&LOAD
      IEFC653I SUBSTITUTION JCL - DISP=SHR,DSN=*.NULLPDS,VOL=REF=*.NULLPDS
    7 XX          DD DISP=SHR,DSN=SYS3.PROCSORT.V2R1.SAS608.LINKLIB
    8 XX          DD DISP=SHR,DSN=SAS.V609.LIBRARY
    9 XX          DD DISP=SHR,DSN=SYS3.&DB2SYS..DSNEXIT
      IEFC653I SUBSTITUTION JCL - DISP=SHR,DSN=SYS3.DB2R.DSNEXIT
   10 XX          DD DISP=SHR,DSN=SYS3X.DB2.&DB2SYS..LOAD
      XX**  UNCOMMENT/SUPPLY YOUR DSN IF YOU NEED TO CONCATENATE SORT LIB
      XX**          DD DISP=SHR,DSN=SYS1.SORT.LINKLIB
      IEFC653I SUBSTITUTION JCL - DISP=SHR,DSN=SYS3X.DB2.DB2R.LOAD
   11 XXCONFIG    DD DISP=SHR,DSN=SAS.V609.CNTL(BATCHXA)
   12 XX          DD DISP=SHR,DSN=&CONFIG
      IEFC653I SUBSTITUTION JCL - DISP=SHR,DSN=NULLFILE
   13 XXSASAUTOS  DD DISP=SHR,DSN=&SASAUTO
      IEFC653I SUBSTITUTION JCL - DISP=SHR,DSN=*.NULLPDS,VOL=REF=*.NULLPDS
   14 XX          DD DISP=SHR,DSN=SAS.V609.AUTOLIB
   15 XXSASHELP   DD DISP=SHR,DSN=SAS.V609.SASHELP
   16 XXSASMSG    DD DISP=SHR,DSN=SAS.V609.SASMSG
   17 XXWORK      DD UNIT=SYSDA,SPACE=(6144,(&WORK),,,ROUND),
      XX             DCB=(RECFM=FS,LRECL=6144,BLKSIZE=6144,DSORG=PS)
      IEFC653I SUBSTITUTION JCL - UNIT=SYSDA,SPACE=(6144,(500,200),,,ROUND),DCB=(RECFM=FS,LRECL=6144,BLKSIZE=6144,
      DSORG=PS)
   18 XXSASLOG    DD SYSOUT=*
   19 XXSASLIST   DD SYSOUT=*
   20 XXSASPARM   DD UNIT=SYSDA,SPACE=(400,(100,300)),
      XX             DCB=(RECFM=FB,LRECL=80,BLKSIZE=400,BUFNO=1)
   21 XXSYSUDUMP  DD SYSOUT=*
      XX**  ADD A LINE LIKE THE FOLLOWING TO CREATE A MACHINE-READABLE DUMP
      XX*SYSMDUMP DD DSN=DUMP,UNIT=SYSDA,DISP=(NEW,CATLG),SPACE=(TRK,(20,5))
   22 //IN1 DD DSN=H2O593.MEMPHIS1.DATA,DISP=OLD                    00000600
   23 //IN2 DD DSN=H2O593.MEMPHIS2.DATA,DISP=OLD                    00000700
   24 //SYSIN DD *                                                  00000800
```

```
12.51.20 JOB20715 ---- MONDAY,    22 NOV 1999 ----
12.51.20 JOB20715 IEF677I WARNING MESSAGE(S) FOR JOB H20593K  ISSUED
12.51.20 JOB20715 $HASP373 H20593K  STARTED - WLM INIT  - SRVCLASS BATCHSTD - SYS SMPD
12.51.20 JOB20715 ACF9CCCD USERID H20593   IS ASSIGNED TO THIS JOB - H20593K
12.51.20 JOB20715 IEF196I ACF9CCCD USERID H20593   IS ASSIGNED TO THIS JOB - H20593K
12.51.20 JOB20715 USRUJI-01 JOB H20593K  USING LOGONID H20593
12.51.20 JOB20715 IEF196I USRUJI-01 JOB H20593K  USING LOGONID H20593
12.51.20 JOB20715 IEF403I H20593K - STARTED - TIME=12.51.20
12.51.24 JOB20715 -                                          --TIMINGS (MINS.)--           ----PAGING COUNTS---
12.51.24 JOB20715 -JOBNAME  STEPNAME PROCSTEP   RC   EXCP   CONN    TCB    SRB  CLOCK   SERV  PG  PAGE  SWAP   VIO SWAPS
12.51.24 JOB20715 -H20593K  STEP1    SAS609     00   2290   1616    .03    .00    .0   15452  0    0     0   1133    0
12.51.24 JOB20715 IEF404I H20593K - ENDED - TIME=12.51.24
12.51.24 JOB20715 -H20593K  ENDED.  NAME-KIRK KANEER BIN 02   TOTAL TCB CPU TIME=   .03  TOTAL ELAPSED TIME=     .0
12.51.24 JOB20715 $HASP395 H20593K  ENDED
```

------ JES2 JOB STATISTICS ------

22 NOV 1999 JOB EXECUTION DATE

       122 CARDS READ

       629 SYSOUT PRINT RECORDS

         0 SYSOUT PUNCH RECORDS

        48 SYSOUT SPOOL KBYTES

      0.06 MINUTES EXECUTION TIME

```
NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.09  TS470
      Licensed to US POSTAL SERVICE, Site 0034819007.

NOTE: Running on IBM Model 9672 Serial Number 013637,
                IBM Model 9672 Serial Number 113637,
                IBM Model 9672 Serial Number 213637,
                IBM Model 9672 Serial Number 313637,
                IBM Model 9672 Serial Number 413637,
                IBM Model 9672 Serial Number 513637.


      Welcome to the SAS Information Delivery System!
      ======  Version 6.09 Enhanced  ======

   For information about new MVS-specific features, enter "help host"
   from any Display Manager command line and select "What's New".

   This message displays in the SAS log when NEWS option is specified.
   You can replace it with your own by editing the NEWS file.

NOTE: The SASUSER library was not specified. SASUSER library will now be the same as the WORK library.
NOTE: All data sets and catalogs in the SASUSER library will be deleted at the end of the session.  Use the NOWORKTERM option to
      prevent their deletion.

NOTE: SAS system options specified are:
      SORT=4

NOTE: The initialization phase used 0.04 CPU seconds and 2767K.
1                                                                             00000900
2             *POBOUT1.PRGM;                                                  00001000
3                                                                             00001100
4                                                                             00001200
4             DATA FPS1 (LABEL='RAW DATA');                                   00001200
5              INFILE IN1;                                                    00001300
6              INPUT PZIP5 $1-5                                               00001400
7                    POBINSTA 6-11                                            00001500
8                    POBUSEA 12-17                                            00001600
9                    CONSTA $18                                               00001700
10                   CONBRA $19                                               00001800
11                   CPO $20                                                  00001900
12                   POB $21                                                  00002000
13                   HWYCON $22                                               00002100
14                   GENDEL $23                                               00002200
15                   CITY $24                                                 00002300
16                   RURAL $25                                                00002400
17                   COMPHONE $26-35                                          00002500
18                   LOGPHONE $36-45;                                         00002600
19                                                                            00002700
20            LABEL POBINSTA='BOXES*INSTALLED';                               00002800
21            LABEL POBUSEA='BOXES*IN-USE';                                   00002900
22                                                                            00003000
23                                                                            00003100
NOTE: The infile IN1 is:
      Dsname=H2O593.MEMPHIS1.DATA,
      Unit=3390,Volume=TOAADO,Disp=OLD,Blksize=6232,
      Lrecl=82,Recfm=FB
```

NOTE: 38412 records were read from the infile IN1.
NOTE: The data set WORK.FPS1 has 38412 observations and 13 variables.
NOTE: The DATA statement used 0.46 CPU seconds and 3378K.

```
23              PROC SORT DATA=FPS1;                          00003100
24               BY PZIP5                                     00003200
25                  CONSTA                                    00003300
26                  CONBRA                                    00003400
27                  CPO                                       00003500
28                  POB                                       00003600
29                  HWYCON                                    00003700
30                  GENDEL                                    00003800
31                  CITY                                      00003900
32                  RURAL                                     00004000
33                  COMPHONE                                  00004100
34                  LOGPHONE                                  00004200
35                  POBINSTA                                  00004300
36                  POBUSEA;                                  00004400
37                                                            00004500
38                                                            00004600
```

NOTE: WER750I End PROC SYNCSORT.   R2.1B
NOTE: The data set WORK.FPS1 has 38412 observations and 13 variables.
NOTE: The PROCEDURE SORT used 0.22 CPU seconds and 3573K.

```
38              DATA FPS2 (LABEL='REVIEWED DATA');            00004600
39              INFILE IN2;                                   00004700
40              INPUT PZIP5 $1-5                              00004800
41                  POBINSTB 6-11                             00004900
42                  POBUSEB 12-17                             00005000
43                  CONSTA $18                                00005100
44                  CONBRA $19                                00005200
45                  CPO $20                                   00005300
46                  POB $21                                   00005400
47                  HWYCON $22                                00005500
48                  GENDEL $23                                00005600
49                  CITY $24                                  00005700
50                  RURAL $25                                 00005800
51                  COMPHONE $26-35                           00005900
52                  LOGPHONE $36-45;                          00006000
53                                                            00006100
54              LABEL POBINSTB='BOXES*INSTALLED';             00006200
55              LABEL POBUSEB='BOXES*IN-USE';                 00006300
56                                                            00006400
57                                                            00006500
58                                                            00006600
```

NOTE: The infile IN2 is:
      Dsname=H2O593.MEMPHIS2.DATA,
      Unit=3390,Volume=TOAAA1,Disp=OLD,Blksize=6232,
      Lrecl=82,Recfm=FB

NOTE: 38385 records were read from the infile IN2.
NOTE: The data set WORK.FPS2 has 38385 observations and 13 variables.
NOTE: The DATA statement used 0.45 CPU seconds and 3537K.

```
58              PROC SORT DATA=FPS2;                          00006600
```

```
59              BY PZIP5                                      00006700
60                  CONSTA                                    00006800
61                  CONBRA                                    00006900
62                  CPO                                       00007000
63                  POB                                       00007100
64                  HWYCON                                    00007200
65                  GENDEL                                    00007300
66                  CITY                                      00007400
67                  RURAL                                     00007500
68                  COMPHONE                                  00007600
69                  LOGPHONE                                  00007700
70                  POBINSTB                                  00007800
71                  POBUSEB;                                  00007900
72                                                            00008000
73                                                            00008100
```

NOTE: WER750I End PROC SYNCSORT.   R2.1B
NOTE: The data set WORK.FPS2 has 38385 observations and 13 variables.
NOTE: The PROCEDURE SORT used 0.22 CPU seconds and 3585K.

```
73          DATA C1 (LABEL='CORRECTIONS');                    00008100
74            MERGE FPS1 FPS2;                                00008200
75              BY PZIP5                                      00008300
76                  CONSTA                                    00008400
77                  CONBRA                                    00008500
78                  CPO                                       00008600
79                  POB                                       00008700
80                  HWYCON                                    00008800
81                  GENDEL                                    00008900
82                  CITY                                      00009000
83                  RURAL                                     00009100
84                  COMPHONE                                  00009200
85                  LOGPHONE;                                 00009300
86                                                            00009400
87              LABEL POBINSTA='INSTALLED BEFORE';            00009500
88              LABEL POBINSTB='INSTALLED AFTER';             00009600
89              LABEL POBUSEA='IN USE BEFORE'                 00009700
90              LABEL POBUSEB='IN USE AFTER';                 00009800
```
NOTE: Label value for variable POBUSEA has been truncated to a length of 40.
```
91                                                            00009900
92              IF (POBINSTA NE POBINSTB) ^ (POBUSEA NE POBUSEB);   00010000
93              KEEP POBINSTA POBINSTB POBUSEA POBUSEB INDIF USEDIF;  00010100
94                                                            00010200
95                                                            00010300
```

WARNING: The variable INDIF in the DROP, KEEP, or RENAME list has never been referenced.
WARNING: The variable USEDIF in the DROP, KEEP, or RENAME list has never been referenced.
NOTE: MERGE statement has more than one data set with repeats of BY values.
NOTE: The data set WORK.C1 has 226 observations and 4 variables.
NOTE: The DATA statement used 0.33 CPU seconds and 3633K.

```
95          PROC SORT DATA=C1;                                00010300
96            BY POBINSTA;                                    00010400
97                                                            00010500
98                                                            00010600
```

NOTE: WER750I End PROC SYNCSORT.   R2.1B
NOTE: The data set WORK.C1 has 226 observations and 4 variables.

4   The S. ystem   12:51 Monday, Novembe.   ., 1999

NOTE: The PROCEDURE SORT used 0.02 CPU seconds and 3869K.

98   PROC PRINT LABEL DATA=C1;   00010600
99   TITLE ' ';   00010700
100   TITLE2 'LISTING OF DATA CORRECTIONS';   00010800
101   00010900
102   00011000

NOTE: The PROCEDURE PRINT printed pages 1-5.
NOTE: The PROCEDURE PRINT used 0.01 CPU seconds and 3742K.

102   PROC SUMMARY DATA=C1;   00011000
103   VAR POBINSTA POBINSTB POBUSEA POBUSEB;   00011100
104   OUTPUT OUT=C2 SUM=;   00011200
105   00011300
106   00011400

NOTE: The data set WORK.C2 has 1 observations and 6 variables.
NOTE: The PROCEDURE SUMMARY used 0.00 CPU seconds and 3882K.

106   PROC SORT DATA=C2;   00011400
107   BY POBINSTA;   00011500
108   00011600
109   00011700

NOTE: WER750I End PROC SYNCSORT.   R2.1B
NOTE: The data set WORK.C2 has 1 observations and 6 variables.
NOTE: The PROCEDURE SORT used 0.02 CPU seconds and 3918K.

109   PROC PRINT LABEL DATA=C2;   00011700
110   TITLE ' ';   00011800
111   TITLE2 'BEFORE AND AFTER BOX TOTALS';   00011900
112   00012000
113   ENDSAS;   00012100

NOTE: The PROCEDURE PRINT printed page 6.
NOTE: The PROCEDURE PRINT used 0.00 CPU seconds and 3882K.

NOTE: The SAS session used 1.79 CPU seconds and 3918K.
NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

LISTING OF DATA CORRECTIONS

OBS	INSTALLED BEFORE	IN USE BEFORE	INSTALLED AFTER	IN USE AFTER
1	.	.	4295	4290
2	0	0	.	.
3	0	0	.	.
4	0	64	200	160
5	500	32	500	132
6	500	70	390	114
7	503	0	503	150
8	515	0	515	454
9	516	0	519	425
10	522	60	239	71
11	523	0	523	200
12	527	23	527	43
13	528	0	2364	2162
14	532	0	678	552
15	535	25	1100	1050
16	536	106	408	109
17	549	89	549	190
18	556	0	556	439
19	560	5	560	555
20	567	98	621	195
21	576	0	576	439
22	580	0	.	.
23	580	0	.	.
24	591	0	280	240
25	604	46	120	33
26	624	111	616	435
27	625	48	1042	629
28	639	0	613	391
29	650	10	750	740
30	660	0	623	618
31	668	102	2537	204
32	682	52	682	451
33	688	0	688	603
34	693	120	1640	1487
35	700	69	500	450
36	703	0	0	0
37	710	0	710	400
38	714	0	850	400
39	720	0	720	543
40	737	90	737	82
41	760	0	615	343
42	760	0	615	343
43	782	0	782	485
44	809	0	.809	725
45	811	0	811	640
46	834	0	664	346
47	834	0	.	.
48	840	0	.850	842
49	843	0	843	843
50	848	0	848	814
51	848	0	.	.
52	857	0	1064	857
53	871	0	864	725
54	892	0	876	772

LISTING OF DATA CORRECTIONS

OBS	INSTALLED BEFORE	IN USE BEFORE	INSTALLED AFTER	IN USE AFTER
55	900	0	1500	1308
56	900	70	.	.
57	900	0	798	680
58	910	0	910	910
59	922	150	632	604
60	922	185	1152	687
61	928	0	928	928
62	934	0	870	750
63	936	0	936	739
64	956	87	903	693
65	973	175	817	817
66	997	200	889	273
67	1000	0	1900	700
68	1000	0	1070	500
69	1014	158	728	234
70	1035	0	1030	702
71	1052	0	1042	629
72	1056	0	1135	945
73	1072	0	1324	1058
74	1074	0	1040	976
75	1074	0	.	.
76	1083	0	974	824
77	1084	0	1084	960
78	1100	0	5000	1700
79	1100	200	2050	1376
80	1145	0	1380	966
81	1164	0	1164	1141
82	1188	78	300	65
83	1230	0	1290	1260
84	1232	0	1232	1100
85	1250	237	1158	531
86	1262	0	1262	962
87	1291	100	2654	2500
88	1292	1100	1308	1194
89	1299	0	1299	1026
90	1300	6	2032	674
91	1303	220	2500	2125
92	1318	0	1318	932
93	1355	110	1354	498
94	1363	41	1343	1283
95	1371	80	2313	371
96	1378	0	1378	1088
97	1384	284	1400	750
98	1388	0	.	.
99	1388	0	1398	716
100	1392	0	1348	542
101	1425	230	1186	218
102	1435	993	1435	1421
103	1448	0	1448	1144
104	1480	0	1480	1080
105	1491	207	1493	1118
106	1500	0	0	0
107	1500	200	2089	411
108	1501	1258	1501	1016

LISTING OF DATA CORRECTIONS

OBS	INSTALLED BEFORE	IN USE BEFORE	INSTALLED AFTER	IN USE AFTER
109	1501	225	1501	1016
110	1508	0	.	.
111	1513	250	1513	441
112	1528	1503	2534	1900
113	1534	0	.	.
114	1534	50	1297	1277
115	1543	0	.	.
116	1551	0	1556	1556
117	1551	0	1551	890
118	1593	0	1776	1388
119	1600	238	1400	238
120	1607	0	1600	1578
121	1650	0	1620	240
122	1650	1270	3036	1270
123	1721	1690	.	.
124	1750	360	1180	558
125	1800	231	1200	448
126	1850	0	.	.
127	1850	0	1850	156
128	1880	250	1880	432
129	1944	0	1944	1923
130	1956	0	2250	2028
131	1978	211	1414	316
132	1984	624	2032	674
133	1984	0	1984	531
134	1988	0	988	125
135	1993	0	1993	1817
136	2000	0	4000	3090
137	2000	0	2000	1800
138	2036	400	2080	944
139	2062	0	335	330
140	2090	0	1374	1196
141	2098	0	1870	1070
142	2106	350	2106	600
143	2127	416	0	0
144	2156	165	2156	371
145	2167	1315	2160	1221
146	2188	200	2188	734
147	2188	720	2188	734
148	2206	93	2206	205
149	2213	0	2213	2021
150	2358	31	.	.
151	2373	0	1790	1283
152	2400	322	.	.
153	2400	322	2400	742
154	2400	45	2400	380
155	2410	0	2722	2306
156	2410	2400	.	.
157	2442	220	2442	560
158	2457	507	2457	1241
159	2485	425	2485	889
160	2491	450	2491	900
161	2500	0	0	0
162	2559	287	2031	383

LISTING OF DATA CORRECTIONS

OBS	INSTALLED BEFORE	IN USE BEFORE	INSTALLED AFTER	IN USE AFTER
163	2562	119	2177	495
164	2607	0	2500	2500
165	2744	487	1368	537
166	2744	487	.	.
167	2780	684	2684	1644
168	2800	120	1020	738
169	2800	257	1845	415
170	2800	257	.	.
171	2978	250	1795	500
172	3000	0	3540	3110
173	3000	0	2343	2339
174	3000	2800	2343	2339
175	3000	592	3022	848
176	3120	60	1099	81
177	3150	0	.	.
178	3200	15	320	319
179	3200	0	.	.
180	3200	0	2004	260
181	3200	0	0	0
182	3300	1100	3316	1064
183	3399	881	3399	1449
184	3500	1500	2494	1292
185	3500	0	800	400
186	3605	1400	3396	3182
187	3610	1090	3116	935
188	3686	1574	1962	1717
189	3795	1152	2450	1187
190	3820	0	3820	300
191	4000	400	1568	418
192	4000	400	.	.
193	4116	895	3974	1004
194	4158	1600	2644	1255
195	4215	950	4217	919
196	4295	0	.	.
197	4571	1100	1581	1005
198	4909	0	4909	3146
199	4965	1720	2505	1771
200	5000	1700	3450	2360
201	5000	795	910	757
202	5000	2180	712	700
203	5200	2451	4026	2580
204	6000	6000	5000	2900
205	6000	2000	5730	2122
206	6008	5600	5580	5550
207	6049	5800	.	.
208	6062	5050	2024	1984
209	6200	3200	6375	3487
210	7000	4574	2509	1674
211	7095	5299	3084	3063
212	7218	7218	4384	3062
213	7218	7218	.	.
214	7500	3800	4800	3600
215	7500	0	2914	2770
216	7600	0	3000	1950

LISTING OF DATA CORRECTIONS

OBS	INSTALLED BEFORE	IN USE BEFORE	INSTALLED AFTER	IN USE AFTER
217	7600	6827	3000	1950
218	7680	4823	4596	4496
219	8000	0	7800	6800
220	8392	5200	6466	5272
221	8473	5700	8473	5520
222	8631	4640	0	0
223	9640	9640	0	0
224	9672	5400	6778	4513
225	10000	6100	10000	8026
226	10000	8000	.	.

12:51 Monday, November 22, 1999   6

BEFORE AND AFTER BOX TOTALS

OBS	_TYPE_	_FREQ_	INSTALLED BEFORE	INSTALLED AFTER	IN USE BEFORE	IN USE AFTER
1	0	226	528127	369162	164264	228403

Part D

1999 PO Box Survey

1999 Post Office Box Survey

A. Purpose

The 1999 Post Office Box (POB) Survey was conducted by the Classification and Product Development Group at the Postal Service from June to August 1999. The survey was a follow-up to the 1998 POB Survey conducted by a contractor – Foster Associates – in the fall of 1998. There were three primary objectives of the survey: (1) to determine box size distributions and the average "capacity factor" in each fee group, (2) to determine the incidence of Fee Group E boxes in each fee group, and (3) to estimate the (own-) price elasticity of demand for P.O. boxes.

B. 1998 POB Survey: Summary

The 1998 POB Survey was conducted by Foster Associates (Foster). Survey questionnaires were sent to 1,608 facilities. The questionnaire asked for the number of boxes installed, by box size; the number of boxes in use, by box size; the fee charged, by box size; the number of E boxes; the number of caller service customers; whether or not there is a waiting list for P.O. boxes; whether or not the number of installed boxes and boxes in use have changed significantly in the past year; and whether or not the facility has 24-hour access to P.O. boxes.

Responses were received from 1,277, or 79.4 percent, of the facilities. Responses were then deleted if any of the four following conditions applied: (1) the reported number of boxes in use exceeded the reported number of boxes installed; (2) the reported number of Fee Group E boxes exceeded the reported

P.O. Box Survey Form – Please Complete and Return

Last fall, you kindly completed a P.O. Box survey questionnaire for a U.S. Postal Service contractor, Foster Associates (copy attached). Since that time, a P.O. Box fee increase went into effect on January 10, 1999. To gauge the effect of that fee increase on box use, the Classification and Product Development unit at Headquarters are requesting updated (July 1999) P.O. Box count information. Please provide the following information for the facility identified on the label attached below:

	Number of Boxes Installed	Number of Boxes in Use
Size 1		
Size 2		
Size 3		
Size 4		
Size 5		

Of the total Number of Boxes in Use, how many are **Group E** (non-fee) boxes? _____

Some customers may have last paid for their boxes before the January 10 fee increase because they prepaid then for six or twelve months. Approximately what percent of your P.O. Box customers have not yet paid the new fees? _____%

If you wish, please comment on any significant changes to P.O. Boxes at your facility since January 10, such as new boxes installed, or box promotions: _____

_____

Your name: _____Tel. #: _____ Date: _____

After completing, please return this form to Melissa Foster at Headquarters by July 15. A stamped, self-addressed envelope is enclosed for that purpose. If you have any questions, you may contact Tom Scherer at (202) 268-4868.

Thank you very much for your time and consideration.

Kirk Kaneer
Economist, Classification and Product Development

Return This Form To:

Melissa Foster
Classification & Product Development
U.S. Postal Service
475 L'Enfant Plaza SW, Room 6670
Washington, DC 20260-2416

"repriced" since new fees went into effect on January 10, 1999.[1] This last request was made for purposes of estimating the price elasticity of demand. In addition, respondents were given space to make comments.

Each facility was sent a copy of its completed 1998 POB Survey return along with the 1999 POB Survey form. This was intended as an orientation aid to the respondents. However, it also had the unintended benefit of improving the data from the 1998 POB Survey. Fifty-eight respondents returned the 1998 form indicating that errors had been made. If the errors were not made explicit, a follow-up phone call was made for clarification. Retroactive corrections were made to the 1998 POB Survey database.

2. Additional Data Clean-Up

An outlier analysis was conducted in July and August 1999 to identify significant differences between the 1998 and 1999 POB Survey results. Records were flagged for follow-up analysis if from 1998 to 1999, the number of boxes in use: (1) increased by more than 40 percent and by more than 50, (2) increased by 15-40 percent and by more than 200, (3) decreased by more than 20 percent and by more than 50, or (4) decreased by 10-20 percent and by more than 100.

Seventy-one records satisfied one of the above criteria. All of these facilities were contacted by phone. Some of the records were correct, but most suffered from either misreported information or data entry errors — either in the 1998 or 1999 POB Survey. Necessary corrections were made. Five facilities admitted to misreported data in 1998 but were not able to reconstruct the correct

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[1] P.O. boxes can be prepaid for up to twelve months, so some customers were not yet paying the fees that went into effect on January 10, 1999 when the survey

data. These five records were therefore eliminated from both the 1998 and 1999 POB Survey databases. This reduced the number of "valid" responses to the 1999 POB Survey to 1,186. For each one of these records, there is a corresponding record in the 1998 POB Survey.

Several dozen respondents to the 1999 POB Survey gave incomplete or ambiguous information. Follow-up phone calls were also made to these facilities to rectify the shortcomings.

3.   Findings

The 1999 POB Survey results are summarized by box size in Table 1. Overall, across all fee groups, the distribution of installed boxes is 61.3 percent size one, 27.6 percent size two, 8.9 percent size three, 1.9 percent size four, and 0.4 percent size five. The distribution of boxes in use is 64.9 percent size one, 25.4 percent size two, 7.9 percent size three, 1.5 percent size four, and 0.3 percent size five. E boxes are estimated to be distributed as follows: 87.4 percent size one, 11.5 percent size two, and 1.1 percent size three. This E box distribution could not be determined directly from the survey results because the survey questionnaire did not ask for E box information by box size. Rather, E box counts reported in the survey were assigned to box sizes in accordance with the DMM prescription that E box service should be offered to eligible customers "through one box of the smallest available size that accommodates the customer's mail volume." DMM §D910.5.1. So, if the number of size one boxes in use equaled or surpassed the number of E boxes, all E boxes were assigned to size one. If there were more E boxes than size one boxes in use, E boxes were

was conducted in July 1999.

Table 1. 1999 POB Survey: Summary Statistics by Box Size

	Box Size					Total
	One	Two	Three	Four	Five	
Installed Boxes						
Number						
Group A	11,675	464	352	68	24	12,583
Group B	19,178	4,239	1,718	252	36	25,423
Group C	347,202	170,957	59,806	14,978	3,193	596,136
Group D	151,424	62,643	14,780	1,204	86	230,137
Total	529,479	238,303	76,656	16,502	3,339	864,279
Distribution						
Group A	92.8%	3.7%	2.8%	0.5%	0.2%	100%
Group B	75.4%	16.7%	6.8%	1.0%	0.1%	100%
Group C	58.2%	28.7%	10.0%	2.5%	0.5%	100%
Group D	65.8%	27.2%	6.4%	0.5%	0.0%	100%
Total	61.3%	27.6%	8.9%	1.9%	0.4%	100%
Total Boxes In Use						
Number						
Group A	11,123	310	307	38	8	11,786
Group B	17,199	3,446	1,513	194	23	22,375
Group C	282,800	121,668	39,420	8,905	1,981	454,774
Group D	120,188	43,583	11,032	826	51	175,680
Total	431,310	169,007	52,272	9,963	2,063	664,615
Distribution						
Group A	94.4%	2.6%	2.6%	0.3%	0.1%	100%
Group B	76.9%	15.4%	6.8%	0.9%	0.1%	100%
Group C	62.2%	26.8%	8.7%	2.0%	0.4%	100%
Group D	68.4%	24.8%	6.3%	0.5%	0.0%	100%
Total	64.9%	25.4%	7.9%	1.5%	0.3%	100%
Box Utilization Rate						
Group A	95.3%	66.8%	87.2%	55.9%	33.3%	93.7%
Group B	89.7%	81.3%	88.1%	77.0%	63.9%	88.0%
Group C	81.5%	71.2%	65.9%	59.5%	62.0%	76.3%
Group D	79.4%	69.6%	74.6%	68.6%	59.3%	76.3%
Total	81.5%	70.9%	68.2%	60.4%	61.8%	76.9%
E Boxes In Use						
Distribution	87.4%	11.5%	1.1%	0.0%	0.0%	100%
Number						
Group A	0	0	0	0	0	0
Group B	1	0	0	0	0	1
Group C	3,202	421	41	0	0	3,664
Group D	29,156	3,830	373	0	0	33,359
Total	32,359	4,251	414	0	0	37,024
Fee Boxes In Use						
Number						
Group A	11,123	310	307	38	8	11,786
Group B	17,198	3,446	1,513	194	23	22,374
Group C	279,598	121,247	39,379	8,905	1,981	451,110
Group D	91,032	39,753	10,659	826	51	142,321
Total	398,951	164,756	51,858	9,963	2,063	627,591
Distribution						
Group A	94.4%	2.6%	2.6%	0.3%	0.1%	100%
Group B	76.9%	15.4%	6.8%	0.9%	0.1%	100%
Group C	62.0%	26.9%	8.7%	2.0%	0.4%	100%
Group D	64.0%	27.9%	7.5%	0.6%	0.0%	100%
Total	63.6%	26.3%	8.3%	1.6%	0.3%	100%

assigned in turn to size two boxes, size three boxes, etc. as necessary. This methodology resulted in no E boxes being assigned to sizes four or five.

The proportions of boxes in each fee group that are E boxes can be determined from Table 1. Fee Group C has 454,774 boxes in use, of which 3,664, or 0.8 percent, are E boxes. Of Fee Group D's 175,680 boxes in use, 33,359, or 19.0 percent, are E boxes.

The distributions of boxes in use in Table 1 permit an estimation of the average "capacity factor" in each fee group. The capacity factor is a measure of the number of size one box-equivalents. Compared to a size one box, a size two box has 1.5 times more capacity, a size three box has 3 times more, a size four box has 6 times more, and a size five box has 12 times more. These factors can be applied to the distributions of boxes in use in Table 1 to produce the following average capacity factors: 1.09 for Fee Group A, 1.27 for Fee Group B, 1.45 for Fee Group C, and 1.28 for Fee Group D. This reflects, for example, that among all the fee groups, Fee Group C has the lowest concentration of size one boxes and the highest concentration of size two, size three, size four and size five boxes.

D. Demand Elasticity Estimation

The (own-) price elasticity of demand for P.O. boxes was estimated by comparing paid (or fee) box counts in the 1998 and 1999 POB Surveys. Based on the timing of the surveys, the counts were centered on late November 1998 and early July 1999, respectively.

Two estimates were made, one for box size one and one for box sizes two through five. This stratification was based on the notion that the demand for size

one boxes is distinct from the demand for size two-five boxes. Size one boxes are rented to a greater extent for personal use – as opposed to commercial use – than size two through five boxes. In a 1996 study, Opinion Research Corporation found that 63% of all size one boxes were rented for personal use only, i.e., not at all for commercial use.[2] In contrast, 37% of size two boxes and 18% of size three boxes were rented for personal use only.

The elasticity estimations are documented in Table 2. Estimates of -0.229 for size one boxes and -0.306 for size two-five boxes were obtained. These reflect the response of quantity demanded to real price increases of 10.19 percent and 10.15 percent, respectively. The real price increases were derived by deflating fixed-weight nominal price increases that went into effect on January 10, 1999 by the change in the CPI-U from November 1998 to July 1999. The response of quantity demanded is manifested as a movement along the demand curve resulting from an upward shift in the supply curve. The supply curve can be thought of as horizontal because the Postal Service is willing to supply any quantity (within capacity constraints) of P.O. boxes at the institutionally set price.

The estimation methodology controls for the growth trend in P.O. box utilization independent of the quantity adjustment to the real price increase. This independent demand growth trend is manifested as an upward shift in the demand curve. It is due to population growth, per-capita income growth, et. al. Consequently, the trend is assumed in the model to be related to real GDP growth. ΔQ in Table 2 is calculated as the difference between Q_2 and Q_1 after Q_1

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[2] Docket No. MC96-3, USPS Library Reference SSR-111, at 57.

Table 2. Elasticity Estimates From 1998 and 1999 POB Surveys			
	Variable	Box Size 1	Box Sizes 2-5
INPUTS			
1. Quantity			
No. of Fee Boxes In Use, late Nov. 1998	Q1	397,715	228,010
No. of Fee Boxes In Use, early July 1999			
Reported		398,951	228,640
Seasonality Adjustment (1)		2,174	72
Net	Q2	401,125	228,712
Percent Change	.	0.86%	0.31%
2. Price			
Fixed-Weight Nominal Price Change (2)	$\%\Delta NP$	12.00%	11.97%
CPI-U Index, Nov. 1998 (3)		1.642	1.642
CPI-U Index, July 1999 (3)		1.669	1.669
Percent Change in CPI-U, Nov. '98 - July '99	$\%\Delta CPI$	1.64%	1.64%
Real Price Change (4)	$\%\Delta P$	10.19%	10.15%
3. Price Implementation			
Box-Weighted Avg. % of Fee Boxes Repriced (5)	RP%	71.53%	71.53%
4. Independent Demand Growth Trend			
Real GDP, 1998 Q4 (Fixed $ Billion) (6)		$ 7,677.7	$ 7,677.7
Real GDP, 1999 Q3 (Fixed $ Billion) (6)		$ 7,910.5	$ 7,910.5
Percent Change, Q4 - Q3	$\%\Delta GDP9M$	3.03%	3.03%
Percent Change, Late Nov. '98 - Early July '99 (7)	$\%\Delta GDP7.5M$	2.53%	2.53%
ESTIMATE, PRICE ELASTICITY OF DEMAND (8)			
Change in Quantity	ΔQ	-6,640	-5,059
Baseline Quantity	Q	284,478	163,091
Percent Change in Quantity	$\% \Delta Q$	-2.33%	-3.10%
Percent Change in Price	$\% \Delta P$	10.19%	10.15%
Price Elasticity of Demand	e	-0.229	-0.306

Notes to Table 2

(1) After follow-up phone calls, five respondents in the 1999 POB Survey reported that their P.O. box counts were temporarily depressed because a local college or university was out of session (in July 1999). The seasonality adjustments reflect the substitution of 1998 POB Survey (November 1998) levels at these five offices.

(2) Price changes are averaged for aggregations of different fee groups and box sizes by using revenue as a weighting factor. This is the same as calculating the percent change in average revenue per box (regardless of box size).

(3) Source: DRI "Trendlong" 06/99 forecast.

(4) $\%\Delta P = ((1 + \%\Delta NP) / (1 + \%\Delta CPI)) - 1$

(5) "Repricing" after the January 10, 1999 new fee implementation date will take up to a year because boxes are prepaid for 6 or 12 months. As of July 10, 1999, the approximate average response date in the 1999 POB Survey, a box-weighted average of 71.53 percent of all boxes had been repriced.

(6) Q4 1998 is actual and Q3 1999 is forecast. Source: DRI, "The U.S. Forecast Summary," July 1999.

(7) $\%\Delta GDP7.5M$, representing the change in real GDP over the 7.5-month period from late November 1998 to early July 1999, is calculated as $\%\Delta GDP9M * 7.5/9$.

(8) $e = \%\Delta Q / \%\Delta P = (\Delta Q/Q) / \%\Delta P$, where:
$\Delta Q = Q2 - (Q1 * (1 + \%\Delta GDP7.5M))$ and $Q = Q1 * RP\%$

is inflated by the 2.53 percent increase in real GDP from late November 1998 to early July 1999. This way, ΔQ represents the quantity change specifically attributable to the real price change.

A unique aspect of post office box service compared to other postal products is that most customers are not immediately confronted with new fees when they are implemented (in this case on January 10, 1999). That is because boxes are prepaid for 6 or 12 months. Design of the 1999 POB Survey recognized this. The survey found that on a box-weighted basis, an average of 71.53 percent of all P.O. boxes had been "repriced" at the time of the survey in early July 1999. As seen in Note 8 to Table 2, this is taken into account in the calculation of $\%\Delta Q$ in the elasticity equation: ΔQ is only compared to the population of boxes that have been repriced, represented by Q1 * RP%. (See Table 2 for variable definitions.)